



**Testimony Re: 2698**  
**House Committee on Health and Human Services**  
**On behalf of**  
**Kansas Society of Radiologic Technologists**  
**February 16, 2004**

Mr. Chairman and members of the committee, my name is Randy Stucky and I represent the Kansas Society of Radiologic Technologists, a professional, non profit organization founded for the express purpose of enhancing, through education, the proper and safe delivery of medical imaging and therapy services. I welcome the opportunity to appear before you today and commend the Kansas legislature for its attention to this very important subject.

90% of public exposure to man-made ionizing radiation results from medical procedures, primarily diagnostic x-ray examinations. The **FDA Bureau of Radiologic Health** has estimated that 30% of exposures to man-made radiation are unnecessary, and 5% to 10% of the unnecessary exposures may be attributed to repeated x-ray examinations. If only 0.5% of the exams performed in 1996, which was 350 million, were improperly performed, the consequences would be more than 4100 non diagnostic medical images every day of the year.

Regretfully the improper utilization and production of excessive and unnecessary medical radiation exposure is a widespread practice throughout our state. Over utilization, as well as improper utilization, of radiation in the practice of medicine is a genuine and ever-increasing health hazard to the public and most importantly to those we hold close to us, that it must be dealt with now. **A physician using x-ray equipment in his practice is under no obligation to ascertain or require any credential or specific education of the person he or she employs to operate the equipment. Literally, anyone off of the street can be hired this morning and be operating this potentially dangerous equipment this afternoon.**

Since the enactment of **Public Law 90-602, the Electronic Products Legislation of 1968**, significant steps have been taken to protect public health through the regulation of electronic products such as x-ray and other medical imaging equipment. However, like your car, the operator determines the use and abuse of this equipment. No one would permit his or her car, with all of its safety features, to be driven by someone who has never been taught to drive. And yet, we allow untrained operators to expose our family and friends to radiation that can affect future generations.



On the Federal level, the U.S. Congress passed a bill in 1981, the **Consumer-Patient Radiation Health and Safety Act**, calling for minimum educational standards for operators of x-ray equipment. The passage of this bill mandated states to establish minimum standards for operators of ionizing radiation equipment. Unfortunately, compliance with this bill is voluntary and there are no penalties for not following this Federal recommendation. One other movement on the Federal level was the approval of the **Mammography Quality Standard Act** of 1992. MQSA established a uniform standard for a radiologic procedure and set minimum qualifications for those who perform it and interpret it. I think all of us can understand the importance of the MQSA. I am confident that everyone here has been touched by the effects of breast cancer in some way.

There are 35 states that have developed minimum standards or adopted regulatory processes for radiologic technologists. One of the 35 states, California, submitted a report to their legislature after 10 years of requiring licensure for radiologic technologists. I have heard that licensure will only raise the cost of healthcare? The report from California showed that for the 10-year period, overall medical fees increased 92.7% throughout the state, while fees for radiology services only increased 59.2%. Certification has not caused increases in the costs of radiology services, but rather has helped to reduce increasing costs of health care through knowledgeable radiologic technologists; competent in reducing not only radiation exposure to the consumer-patient, but also in reducing waste of medical supplies, technologist and patient time and the wear and tear of radiologic equipment from improper use.

During President Jimmy Carter's administration, he formed the **Department of Health and Human Services task force** to investigate the effects of low-level radiation. Among the many recommendations of this report, minimum educational standards for the operators of x-ray machines were recognized as one of the foremost methods of reducing radiation exposure. This report also showed that:

- A patient undergoing the same x-ray examination may receive 100 times more radiation in one hospital or clinic as in another.
- Over 90% of the radiation the general public receives is from exposure to medical x-rays, while less than 10% is from naturally occurring radiation, nuclear fallout, nuclear accidents or nuclear power plants.
- Over 40% of personnel administering ionizing radiation for medical purposes have not received any formal education in radiologic technology.
- 80% of the medical radiation the consumer-patient receives is administered in facilities other than a hospital.
- The patient receives more radiation from an x-ray examination of the abdomen than the entire exposed public received from the Three Mile Island incident.



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In 1979, President Carter signed **Executive Order 10831**, which approved a number of recommendations for the guidance of Federal agencies. Recommendation number eight (8) stated:

“Operation of medical or dental x-ray equipment should be (performed) by individuals who have demonstrated proficiency to produce diagnostic quality radiographs with the minimum of exposure required; such proficiency should be assessed through national performance-oriented evaluation procedures or by didactic training and practical experience identical to, equivalent to, or greater than training programs and examination requirements of recognized credentialing organizations”

There are 2500 registered technologists practicing in Kansas that have demonstrated their competency through education and voluntary certification through the American Registry of Radiologic Technologists (ARRT) and other certification bodies. There is no way of knowing how many people with minimal training and no certification are operating x-ray, radiation therapy and other medical imaging equipment in Kansas and administering potentially harmful ionizing radiation to family and friends without having demonstrated scientific knowledge, technical understanding, clinical competency or professional responsibility for the practice of proper radiological procedures.

From its inception, the Kansas Society of Radiologic Technologists has recognized that formal education coupled with moral obligation is a controlling factor in the competence of the individual and in the reduction of unnecessary radiation to both the patient and the practitioner. As educated radiologic technologists, we strive to eliminate unnecessary radiation, and optimize that which is needed to produce a diagnostic image. We have voluntarily submitted to examination and have met the educational standards prescribed by the profession.

The Kansas Society of Radiologic Technologists does not believe there is an alternative to uniform standards. We remain firm in our opinion that without uniform standards for qualifications of persons who perform medical imaging and radiation therapy procedures, the public, specifically family and friends will remain unprotected and at the mercy of untrained personnel. Because of the unique nature and inherent danger of radiation, the KSRT believes that every patient undergoing a medical imaging examination has the right to have that examination performed properly and with minimal risk by a qualified practitioner.

A voluntary credentialing process for medical radiologic technologists through the American Registry of Radiologic Technologists (ARRT) has existed for over 75 years. Other nationally recognized credentialing agencies are the Nuclear Medicine Technology Certification Board (NMTCB) and Cardiovascular Credentialing International (CCI). But these credentials are voluntary and are not



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a condition for practice in Kansas. Consequently, the voluntary credentialing programs cannot effectively impact the radiation health and safety of the citizens of Kansas, since non-credentialed personnel can still administer medical radiation examinations.

We commend the Kansas legislature for its interest and timely concern with respect to the potential health hazards of medical diagnostic x-rays resulting from the lack of proper safeguards and qualifications of persons operating ionizing radiation equipment. We believe that this legislative area demands prompt and effective action. We urge the Kansas legislature to continue its effort to seek a sound legislative solution to this problem which we believe is essential to protect the rights of our family and friends to properly performed radiologic examinations and from the potential hazards of excessive and unnecessary medical imaging examinations and radiation therapy procedures. Thank you.

Sincerely,

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Executive Board member & Legislative Chair  
Kansas Society of Radiologic Technologists